OMB Control No. 2060-0328
Expires 07/31/2011

Implementation Plan

Production Sector

Company Information

Plains Exploration & Production Company
717Texas Avenue, Suite 2100
Houston, TX 77002

If the information provided above is incorrect, please make corrections below.

Company Name:	Plains Exploration & Production Company
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Implementation Plan Elements

ELEMENT 1 Best Management Practices (BMPs)
The following BMPs have been identified as significant opportunities to cost effectively reduce methane emissions from the production sector. They were selected based on their applicability to the industry, economic feasibility, and cost-effectiveness. There are 2 core BMPs for the production sector:

BMP 1 Identify and replace high-bleed pneumatic devices
BMP 2 Install flash tank separators on glycol dehydrators

For detailed information on these BMPs, please refer to the Lessons Learned publications on the Natural Gas STAR Web site: epa.gov/gasstar/tools/recommended.html.

ELEMENT 2 Partner Reported Opportunities (PROs)
Current partners have reported many processes and technologies that are considered "other Best Management Practices" by the program. New partners are encouraged to evaluate and report current and new practices or technologies that cost effectively reduce methane emissions. PROs are made available to all partners, and can be viewed at: epa.gov/gasstar/tools/recommended.html.

ELEMENT 3 Inventory Past Reductions
Partners are encouraged to report past methane emission reductions back to 1990. Accounting for these historical reductions will create a permanent record of your company's methane emission reduction efforts. More information is available in the Spring 1999 Natural Gas STAR Partner Update, which can be viewed at: epa.gov/gasstar/newsroom/partnerupdate.html.

The Implementation Plan is designed to be a dynamic tool for Natural Gas STAR Partners to plan their program activities. As company priorities and plans shift over time, the Implementation Plan may be revised or updated by submitting a new form to the program.

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ELEMENT 1
Best Management Practices

BMP 1
Identify and Replace High-Bleed Pneumatic Devices

Pneumatic devices used to control and monitor gas and liquid flows and levels in dehydrators and separators, temperature in dehydrator regenerators, and pressure in flash tanks emit large amounts of methane into the atmosphere. Replacing these with low- or no-bleed devices reduces or eliminates emissions and improves safety.

Estimated Reduction Potential
124 Mcf/year/device

Will you be implementing this BMP? ☐ *Yes* xx *No*

If no, why?

☐ *Not cost effective*
xx *May consider at a later date*
☐ *Other* _____

Please describe: Will evaluate for new installations

If yes, at what scale will you be implementing this BMP?

☐ *Company Wide*
☐ *Pilot Project*
☐ *Other*

Please describe: _____

Activity Summary

Number of high-bleed pneumatic devices in system? _____

Number of high-bleed pneumatic devices to be replaced? _____

Replacement Schedule

Number of high-bleed pneumatic devices to be replaced by the end of:

Year 1: _____ *Year 2:* _____ *Year 3:* _____ *Year 4:* _____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

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BMP 2
Install Flash Tank Separators on Glycol Dehydrators

Installing a flash tank separator in a glycol dehydrator facilitates the removal of methane and natural gas liquids from the glycol stream. The recovered gas can be put back into the pipeline, used as a fuel on-site, or flared.	*Estimated Reduction Potential 170 scf/MMcf of throughput*

Will you be implementing this BMP? ☐ Yes xx No

If no, why?

- ☐ Not cost effective
- xx May consider at a later date
- ☐ Other _____

Please describe: Will evaluate for new installations.

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
- ☐ Pilot Project
- ☐ Other _____

Please describe: _____

Activity Summary

Number of glycol dehydrators currently equipped with flash tank separators ____

Number of glycol dehydrators suitable for flash tank installation? ____

Replacement Schedule

Number of flash tank separators to be installed by the end of:

Year 1: ____ Year 2: ____ Year 3: ____ Year 4: ____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

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ELEMENT 1 Best Management Practices (BMPs) continued

The following BMPs have been identified as opportunities to cost effectively reduce methane emissions from the production sector. They were selected based on their applicability to the company, economic feasibility, and cost-effectiveness. At this time PXP is only looking at our non-California facilities for the STAR program. The 5 BMPs selected by PXP are:

BMP #1: Optimize Dehydration of Natural Gas Operations
Current gas dehydration operations will be evaluated for methane reduction opportunities in the following areas;

- *Optimization of glycol circulation rates,*
- *Flash tank separator (FTS) installation,*
- *Replacement of gas driven pumps with electric pumps, and*
- *Replacement of current glycol unit with desiccant dehydrator.*

BMP #2 – Installation of Plunger Lift Systems
All producing wells will be screened for beneficial installation of plunger lift systems.

BMP #3 – Convert Gas-Driven Pumps to Electrical Pumps
Operations with Gas-driven pumps will be assessed to determined cases for installation of electrical pumps.

BMP #4 – Consolidate Crude Oil and Produced Water Storage Tanks
Existing tank batteries will be evaluated for consolidation opportunities.

BMP #5 – Usage of Foaming Agents
All producing wells will be screened for use of foaming agents to reduce emissions.

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ELEMENT 2

Partner Reported Opportunities (PROs)

[redacted]

Your company may take advantage of additional technologies or practices to reduce methane emissions. These can be reported to Natural Gas STAR as PROs. Following is a list of some of the PROs that have been reported by other Gas STAR partners, which may be applicable to your operations (for more information on these PROs, please view: epa.gov/gasstar/tools/recommended.html*).*

- φ Install Vapor Recovery Units (VRUs)
- φ Perform reduced emissions completions
- φ Install electronic safety devices
- φ Install instrument air systems
- φ Eliminate unnecessary equipment and/or systems
- φ Install plunger lifts in gas wells

[redacted]

PRO *Reduction of Operating Pressures* At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project xx Other Will implement at non-California locations.	*All producing wells will be screened for opportunities to reduce emissions through reducing operation pressures.*
PRO *Installation of Vapor Recovery Units on Tank Batteries* At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project xx Other Will implement at non-California locations.	*All tank batteries will be screened for opportunities for installation of vapor recovery units.*
PRO _____ At what scale will you be implementing this BMP? ☐ Company Wide ☐ **Pilot Project** ☐ Other _____	
PRO _____ At what scale will you be implementing this BMP? ☐ Company Wide ☐ Pilot Project ☐ Other _____	

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ELEMENT 3
Inventory Past Reductions

As a first step, many new partners find it useful to inventory and document past methane emission reduction efforts. The inventory process helps companies quantify the success of their past activities and target future emission reduction efforts. Historical emission reductions identified as part of the inventory process can be reported to the Gas STAR Program.

Will you inventory past activities to include in your annual report? xx Yes ☐ No

If yes, please describe your company's plans for reviewing past emission reduction activities.

Past reduction activities are as follows:

Methane Reduction Practice	Cases	Estimated Methane Reduction
Plunger lift installed on producing wells		
➢ *2009*	*157*	*662,196 Mcf*
➢ *2008*	*149*	*629,086 Mcf*
➢ *2007*	*141*	*595,976 Mcf*
➢ *2006*	*133*	*562,866 Mcf*
➢ *2005*	*126*	*525,757 Mcf*
Total Reduction 2005-2009		*2,975,881 Mcf*
Consolidation of production tanks (2009)	*12 Tanks*	*12,000 Mcf*
Use of foaming agents (reduction of 2520 Mcf/yr/well)	*140*	*352,800 Mcf/yr*
Total Reduction 2005-2009		*1,764,000 Mcf*
Total Reduction 2005-2009		***4,751,881 Mcf***

The Natural Gas STAR Program thanks you for your time.

Please send completed forms to:

Regular Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Express/Overnight Mail
The Natural Gas STAR Program
U.S. EPA (6207J)
1310 L Street, NW
Washington, DC 20005

Questions? Please call Roger Fernandez: (202) 343-9086 or Fax (202) 343-2202